ANNEX NO. 1 BETWEEN

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LANGLEY RESEARCH CENTER

AND

RAYTHEON INTELLIGENCE AND SPACE UNDER

SPACE ACT UMBRELLA AGREEMENT SAA1-35810 FOR

EXOSPEAR COHERENT LIDAR TRACKING SYSTEM UPGRADE

ARTICLE 1. PURPOSE

The purpose of this Annex is to continue efforts that originally began under SAA1-22746, Annex 1. Currently, the control computer for the NASA LaRC ExoSPEAR Coherent Lidar Tracking System is not functional and requires repair. These efforts have been delayed due to the ongoing COVID-19 pandemic which resulted in the closure of Raytheon facilities. Once the Raytheon facilities are open for normal operations, the Parties will continue to collaborate to repair the control computer.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the Space Act, Other Transactions Authority (OTA), 51 U.S.C. § 20113(e).

ARTICLE 2. RESPONSIBILITIES

A. NASA LaRC will use reasonable efforts to:

- 1. Transfer any unobligated funds remaining under Annex 1 to SAA1-22746 to this Annex.
- 2. Collaborate with Partner and attend technical interchange meetings, as necessary, to discuss and plan efforts to repair the lidar control computer.
- 3. Repair lidar control computer through procurement of necessary parts, materials, and services.

B. Partner will use reasonable efforts to:

- 1. Provide reimbursement to NASA LaRC, using Raytheon IRAD funds, in advance of initiation of NASA LaRC efforts as outlined in Article 4. Financial Obligations.
- 2. Continue to maintain suitable facility space for the ExoSPEAR lidar system with appropriate cleanliness, electrical power, cooling, laser/electrical/personnel safety, and control access.
- 3. Maintain and operate the lidar in accordance with previously provided NASA LaRC written instructions for maintenance and operations.

- 4. Prevent unauthorized use or access to the lidar.
- 5. Collaborate with NASA LaRC and attend technical interchange meetings, as necessary, to discuss and plan efforts to repair the lidar control computer.

ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

1. NASA LaRC to transfer to this Annex any unobligated Upon expiration of the funds remaining under Annex 1 to SAA1-22746.

Annex 1 to SAA1-22746.

Annex 1 to SAA1-22746 (12/21/2021) or completion of all obligations, whichever comes first.

2. Raytheon to provide any remaining advance payment due to NASA LaRC, as outlined in Article 4. Financial Obligations.

Within one (1) month following Milestone 1

3. NASA LaRC and Raytheon to collaborate and attend technical interchange meetings, as needed.

Throughout period of performance.

4. Raytheon to maintain suitable facility space for the ExoSPEAR lidar system, prevent unauthorized access, and operate in accordance with NASA instructions.

Throughout period of performance.

5. NASA LaRC to repair lidar control computer.

Within twenty-two (22) months following
Milestone 2, contingent upon reopening of
Raytheon facilities

ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$68,112 for NASA to carry out its responsibilities under this Annex.

Each payment shall be marked with:

Langley Research Center SAA1-35810, Annex 1.

Partner authorizes NASA to transfer to this Annex, any unobligated funds remaining under Annex 1 to SAA1-22746 upon expiration or completion of all obligations, whichever comes first. However, should additional expenditures under Annex 1 to SAA1-22746 be processed, this will reduce the unobligated funds available for transfer to this Annex and Partner agrees it will be responsible for providing funds necessary to cover any shortfall, if needed. Similarly, should actual expenditures under the Annex 1 to SAA1-22746 be less than obligated amounts, the excess funds will be transferred to this

Annex. At the completion of this Annex, any unspent funds will be processed in accordance with Article 4.B, below.

B. NASA will not provide services or incur costs beyond the current funding. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within one (1) year after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement. Return of unspent funds will be processed via Electronic Funds Transfer (EFT) in accordance with 31 C.F.R. Part 208 and, upon request by NASA, Partner agrees to complete the Automated Clearing House (ACH) Vendor/Miscellaneous Payment Enrollment Form (SF 3881).

ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

- A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights Data Rights Article of the Umbrella Agreement will be protected for the period of one (1) year.
- B. Under paragraph H. of the Intellectual Property Rights Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data provided.
- 1. Background Data: *The Disclosing Party's Background Data, if any, will be identified in a separate technical document.*
- 2. Third Party Proprietary Data: *The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.*
- 3. Controlled Government Data: *The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.*
- 4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement: *None*.

ARTICLE 6. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or twenty-two (22) months from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

ARTICLE 7. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 8. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Management Points of Contact

NASA Langley Research Center

David F. Moore

Associate Director for Space Technology and Advanced Development Programs

Mail Stop: 104 Hampton, VA 23681

Phone: 757-864-9169

Email: david.f.moore@nasa.gov

Raytheon Intelligence and Space

Sheri I. Moore

Subcontracts Manager 2501 W. University Drive McKinney, TX 75071-2813

Phone: 469-927-4557

Email: sheri.moore@raytheon.com

Technical Points of Contact

NASA Langley Research Center

Dr. Narasimha S. Prasad Aerospace Technologist

Mail Stop: 468 Hampton, VA 23681 Phone: 757-864-9403

Email: narasimha.s.prasad@nasa.gov

Raytheon Intelligence and Space

Duane D. Smith, Ph.D.

Principal Fellow

2000 E. El Segundo Blvd. El Segundo, CA 90245-4501

Phone: 310-616-1858

Email: duane.d.smith@raytheon.com

ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LANGLEY RESEARCH CENTER BY: David A. Dress Director, Space Technology and Exploration Directorate	RAYTHEON INTELLIGENCE AND SPACE APPROVED By Sheri I Moore at 8:22 am, Dec 16, 2021 BY: Sheri I. Moore Subcontracts Manager
DATE:	DATE: